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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Andreas Siemens

Application No. 10/528,396 filed June 12, 2006

For: METHOD FOR EVALUATION OF A SCATTERED LIGHT SIGNAL AND

SCATTERED LIGHT DETECTOR FOR CARRYING OUT SAID METHOD

EXAMINER: Iyabo S. Alli

ART UNIT: 2877

NOTICE OF ALLOWANCE ISSUED: June 17, 2008

Commissioner of Patents

BY HAND

United States Patent and Trademark Office

Post Office Box 1450

Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

This is an Information Disclosure Statement which is being submitted together with the attached 2-page listing of twelve references and a fee of \$180.00, paid per attached Notice, which is being paid inasmuch as the prosecution of the application is closed, the Notice of Allowance having been issued on June 17, 2008. Should no payment be attached, or should a greater or lesser fee be required, please charge our Deposit Account No. 04-0753 and notify counsel of such charge or credit.

The references being submitted first came to the attention of applicant's German Patent Counsel (Patentanwalt) on June 27, 2008, and thus less than three months from today's submission. These references, as well as a thirteenth reference which is already of record, namely, published patent application US 2003/0001746 A1, were cited not in an Official Action or Search Report issued by a foreign Patent Office during the examination of a foreign counterpart application but in an opposition (Einspruch) filed by a third party in connection with a counterpart European patent application. A copy of the opposition is likewise submitted, however, this submission should not be construed as an admission that the references are necessarily relevant to the patentability of the claims appearing in the instant US application, or that the applicant agrees with what is said in the opposition. The references are nonetheless being submitted in the interest of full disclosure and candor on the part of applicant.

The following is supplemental to the foregoing so as to comply with the requirement that there be a statement of relevance with respect to the nine references which are not in the English language, no such statement being required with respect to the three references which are in the English language, namely, GB 2 334 096 A, WO 1998/026387 A2 and EP 0 419 668.

EP 0 660 282 B1

EP '282 discloses a method for evaluating a scattered light signal generated by a scattered light receiver, which method comprises the following steps. After a

photo-optical sensor has detected a scattered light signal, the detected signal is compared to a threshold and a latent alarm signal is generated when the threshold is exceeded. This latent alarm signal is verified by a fuzzy logic algorithm, using by-parameters of the detected signal, namely, noise, gradient or asymmetry. These by-parameters are fuzzyfied in a fuzzy controller to generate fuzzy-sets. Defined fuzzy-rules are then applied to the those fuzzy-sets enabling a classification of the quality of the detected signal and of signal disruptions. The latent alarm signal is converted according to the fuzzy algorithm to an alarm signal or is cancelled, depending on the outcome of the fuzzy logic algorithm.

DE 26 28 146 A1

DE '146 discloses a smoke detector comprising evaluation means for evaluating the signal strength of a detected scattered light signal. An alarm signal is generated if the evaluated signal strength exceeds a preset threshold 1. In addition to the evaluating means for evaluating the signal strength, the smoke detector is also provided with evaluating means for evaluating the increase of the signal strength over a specific period. If the evaluated increase exceeds a preset threshold 2, the evaluating means for evaluating the increase of signal strength generates a respective signal lower than the mentioned preset threshold 1, i.e., the threshold is amended against the evaluated increase of the signal strength.

**DE 101 47 103 A1**

DE '103 discloses a smoke detecting method using multiple alarm sensors. The detected fire alarm signals of the fire alarm sensors are converted to a single alarm signal A and a fire type signal B. An alarm signal can be triggered and the fire type detected based on these two signals, and especially on the basis of the chronological sequence of these generated signals A and B. The method shown in this references is based on analyzing the chronological sequence of the combined alarm signal A and the fire type signal B, evaluated by a mathematical algorithm using multiple fire detection signals of multiple fire detection sensors.

**DE 36 14 140 A1**

DE '140 discloses an output correction arrangement for an analogue sensor using a drift compensation method to compensate for long time changes in the output characteristics of the analogue sensor in order to provide a correct analogue sensor detection value. To adjust the output of the analogue sensor to a standard value, the gradient of the sensor response between a condition when the quantity being measured is zero and a pseudo-condition equivalent to the quantity having a reference value is stored and calculated. If the arrangement is used with a scattered light smoke detector, the scattered light smoke detector may have a reference source adjusted to supply a light level equivalent to the light scattered from the main source to the detector by a specified smoke density. The detector outputs with no smoke present and the reference source on and off are measured by a CPU to deter-

mine the gradient of the output/smoke density characteristics, and this gradient is used subsequently to adjust the sensor output.

DE 100 46 922 C1

DE '922 discloses a scattered light detector having a light transmitter and a light receiver arranged so that a scattering point of the light transmitter and light receiver are located outside the scattered light detector in a free space to distinguish between actual smoke and permanent foreign bodies in the scattering point of the scattered light detector. Such foreign bodies can be conductors which are cut off manually or boxes which are stacked over one another. When there is smoke, there is registered an increasing intensity of scattering light signals with increasing time, whereas when a foreign body penetrates the scattering point, there occurs a jump function over a short time during which the signal is drawn into a fixed signal afterwards. According to this reference, the scattered light detector incorporates means for distinguishing between that "jump" and linear signals.

DE 694 19 645 T2

DE '645 shows a smoke type fire detector which detects smoke density even when there is an internal temperature change. An internal temperature detecting unit detects an ambient temperature at a light emitting element and a light receiving element. A correction coefficient which has a value associated with the ambient temperature detected by the temperature detecting unit is used to correct an output level of the light receiving element.

DE 199 42 766 A1

DE '766 shows an arrangement for detecting the flow direction and flow rate of gases. A measurement chamber which is surrounded by a perforated wall has at least one optical sensor and one receiver. The perforated wall establishes a detector for the flow rate and/or the flow direction of a gas stream passing through. In this way, the perforated wall establishes the surrounding of the measurement chamber and the sensing element.

DE 29 17 454

DE '454 shows a method of monitoring the rate of change of an electrical signal and especially a method of monitoring the rate of change of a first including and includes the steps of periodically sampling the first signal by frequency conversion, sampling and counting. A first reference signal is generated which, for each period, differs from the sampled amplitude of the first signal by a predetermined amount. The amplitude of the first signal and of the first reference signals are compared and an output signal is generated when the amplitude of the first signal crosses the amplitude of the first reference signal

DE 24 48 195 A1

DE '195 shows a smoke detector of the type utilizing photoelectric detection of light reflected from smoke particles in which a light generating device is energized intermittently and a photo-responsive device and an associated amplifier produce energy pulses when smoke is present. The energy pulses are used to actuate

an alarm. A capacitor is provided across the power leads to the amplifier for the purpose of preventing power supply voltage changes from affecting the operation of the amplifier. Also, means are provided between the capacitor and the power supply for electrically isolating the amplifier and the capacitor from voltage pulses occurring at the power supply at least during the time during which the light source emits light.

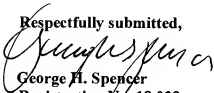
(In the opposition, the page entitled *Zusatzblatt zu S. 3* (Additional Sheet to Page 3) identifies the above-discussed reference as DE 24 38 195 A1 but the reference is correctly identified as DE 2448195 on page 11/14 of the opposition.)

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In view of the above, it is respectfully requested that the twelve references be considered and made of record.

September 3, 2008

Respectfully submitted,



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